

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A modified ~~polypeptide~~ human immunodeficiency virus type 1 (HIV-1) gp41 polypeptide, comprising:

an immunodominant region (IDR) of gp41,

a N-helix region of gp41,

a C-helix region of gp41, and

a connecting loop comprising a hydrophilic synthetic linker between the N- and C-helices of a gp41 ectodomain of HIV-1, the connecting loop comprising a linker fragment, the linker replacing amino acids 599-610 of gp41, the numbering scheme being based upon the prototypic isolate HIV-1 HxB2,

wherein the linker fragment is configured to:

maintain a native conformation of an interaction between the N- and C-helices, and

have a hydrophilicity that provides a soluble and stable trimeric form to said modified polypeptide.

2. (Currently Amended) The modified polypeptide according to claim 1, wherein said linker replaces all or a part of a wildtype oligopeptide deleted from the connecting loop between the N- and C- helices.

3. (Currently Amended) The modified polypeptide according to claim 1, wherein said linker replaces amino acid residues ~~603 to 615~~ 60 to 71 of SEQ ID NO:1 ~~SEQ ID NO 1~~.

4. (Currently Amended) The modified polypeptide according to claim 1, wherein said linker replaces amino acid residues ~~530 to 542~~ 61 to 72 of SEQ ID NO:14 ~~SEQ ID NO 14~~.

5. (Previously Presented) The modified polypeptide according to claim 2, wherein said deleted wildtype oligopeptide has at least 10 amino acid residues.
6. (Previously Presented) The modified polypeptide according to claim 1, wherein said linker is an oligopeptide.
7. (Currently Amended) The modified polypeptide according to claim 6, wherein ~~most of the amino acid residues of the linker are~~ comprises a majority of hydrophilic amino acid residues.
8. (Currently Amended) The modified polypeptide according to claim 1, wherein the linker comprises the amino acid sequence set forth in ~~SEQ ID NO:2~~ SEQ ID NO 2.
9. (Currently Amended) The modified polypeptide according to claim 1, wherein the immunodominant region ~~has~~ is modified to incorporate at least one mutation ~~that prevents a cross reaction of a B-type cell and/or of a T-type cell with~~ to eliminate or reduce an auto-immune response against a host protein.
10. (Previously Presented) The modified polypeptide according to claim 9, wherein the mutation prevents cross reaction with IL-2.
11. (Previously Presented) The modified polypeptide according to claim 9, wherein said mutation is located in a sequence selected from the group consisting of the sequences set forth in SEQ ID NOs: 3-6.
12. (Canceled)
13. (Currently Amended) The modified polypeptide according to claim 1, wherein ~~it the modified peptide~~ is selected from the group consisting of the polypeptides set forth in ~~SEQ ID NOS:8 and 17-20~~ SEQ ID NO 8, SEQ ID NO 17, SEQ ID NO 18, SEQ ID NO 19, and SEQ ID NO 20.
14. (Currently Amended) The modified polypeptide according to claim 1, wherein ~~it the modified peptide~~ is the polypeptide set forth in ~~SEQ ID NO:8~~ SEQ ID NO 8.

15. (Currently Amended) The modified polypeptide according to claim 1, wherein ~~it the modified peptide~~ is N-truncated ~~with a length of deletion being of a size ranging by deleting from 8 to 15 amino acid residues at the N-terminal position.~~

16. (Currently Amended) The modified polypeptide according to claim 15, wherein ~~it the modified peptide~~ is truncated ~~of by deleting~~ at least 10 amino acid residues at the N-terminal position.

17. (Currently Amended) The modified polypeptide according to the claims 15, wherein ~~it the N-truncated polypeptide~~ is a polypeptide as set forth in ~~SEQ ID NO:21~~ ~~SEQ ID NO 21.~~

18. (Withdrawn) A polynucleotide encoding the modified polypeptide according to claim 1.

19. (Withdrawn) The polynucleotide of claim 18 which is DNA.

20. (Withdrawn-Currently Amended) The polynucleotide according to claim 18, wherein it is the polynucleotide set forth in ~~SEQ ID NO:7~~ ~~SEQ ID NO 7.~~

21. (Withdrawn) An expression vector comprising at least a transcription promoter, a DNA segment encoding the modified polypeptide according to claim 1 and a transcription terminator.

22. (Currently Amended) ~~A vaccine~~ An immunogenic composition containing as an active ingredient a modified polypeptide as defined in claim 1.

23. (New) A modified human immunodeficiency virus type 1 (HIV-1) gp41 polypeptide, wherein the linker replaces amino acids 593-617 of gp41, the numbering scheme being based upon the prototypic isolate HIV-1 HxB2.